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WISDOM IS COMMON SENSE TO AN UNCOMMON DEGREE

THE REA LINEMAN

RURAL ELECTRIFICATION ADMINISTRATION

U. S. DEPARTMENT OF AGRICULTURE

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ARKANSAS MANAGER SAVES LINEMAN'S LIFE

"WORKSHOP" CONFERENCE
BEGINS OCTOBER 17

A Safety and Job Training Supervisors' "Workshop" Conference will be held at REA Headquarters in St. Louis, October 17, 18, and 19, 1945.

Instructors from the fifteen states participating in the program will attend the REA-sponsored event to discuss Safety and Job Training problems for the coming year.

Illinois foremen and managers will hold a Safety Conference, October 15 and 16, also at REA Headquarters, Boatmen's Bank Building, St. Louis, Mo.

LOW VOLTAGE SHOCK CAUSES CHILD'S DEATH

The eight-year-old daughter of an Illinois co-op member walked up to an outside water faucet projecting from the wall of her home and was electrocuted when she touched the faucet.

The investigation disclosed that her father had installed a water pump in the basement and grounded the pump to the water piping system. The pipe on which the ground was made extended through the basement wall and ran under ground to a well in the yard. Under normal conditions this would have been an excellent ground, since the pipe extended to the bottom of the well.

But this water system did not serve as a ground. Resistance offered by rusty bolts, pipe compound and rubber gaskets at the pump prevented the current passing through the suction line from the pump to the bottom of the well, thus destroying the ground. The ground clamp was attached to the discharge side. The romax cable from the pump pressure switch to the electric motor was not fastened to the pressure switch case with a clamp-type bushing as it should have been but extended unprotected through the knock-out plug hole. Vibration caused the sharp edge of

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ARTIFICIAL RESPIRATION AFTER ACCIDENT PROVES SUCCESSFUL

James L. Rhodes, Manager of the Clay County Electric Cooperative Corp., Corning, Ark., successfully resuscitated Lineman Albert S. Lester recently by applying the Schaefer Prone Pressure Method of artificial respiration. Here's what happened:

Lineman Lester climbed the pole to open three 25-amp circuit reclosures to disconnect the hot line jumpers and breakers from the supply line. In doing this he disconnected the center jumper first and was attaching the clamp to ground when the jumper contacted the top of the energized south breaker. With both hands badly burned and losing consciousness, Lester slumped in his belt and slid down the pole. The Safety belt slowed his fall and no injury resulted from this part of the accident.

Manager Rhodes applied artificial respiration for twenty minutes before the injured lineman began breathing. Five minutes later the patient became fully conscious.

How many of us, faced with a situation of this sort, could be as proficient as Manager Rhodes? Artificial respiration must be applied at once to be effective. Very few electric shock cases are revived if more than five minutes elapses before artificial respiration is started — there isn't time to remove the patient to a doctor's office or hospital; his life depends on your knowing what to do on the spot.

"The REA Lineman" congratulates Manager Rhodes. We are sure that the readers of this publication would like to send their congratulations too.

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Published Monthly in the Interest of Safety
for Employees of REA Systems

David A. Fleming, Editor

HOW ABOUT V-S DAY?

V-J Day touched off the greatest celebration in the history of our country -- a long and bloody war had come to a victorious end. No longer will the casualty list continue to grow -- man-made death and destruction has ceased. But, has it ended?

The National Safety Council accident statistics show that 95,000 people were killed, 9,800,000 injured, and 340,000 permanently disabled during 1944. In addition, approximately two and a half billion dollars worth of property was destroyed by accident.

What about this wanton destruction of life and property? When may we expect V-S Day (Victory in Safety)? Perhaps we can never celebrate V-S Day because we are human. We are subject to acts of carelessness, sometimes do not think, often tackle jobs beyond our skill and ability. We can, however, greatly reduce accidental loss of life and personal injury by following safe work practices on the job and taking these safety lessons home with us at night.

Safety is a twenty-four hour program and should be practiced off the job as well as on the job. Safety-mindedness is "catching." If we take it home some of it is bound to rub off on the family. Thirty-two thousand deaths and 4,800,000 injuries occurred in homes through accidents last year.

A big job lies ahead which will require careful planning. The release of material and the great demand for electrical service will result in the rapid expansion of our systems. More miles of line will be built. More skilled men will be needed to maintain and operate these lines. Job training will provide the necessary men. Much of the co-op equipment is four years older, especially the trucks. Vehicles which you meet on the highway are also four years older. The lifting of speed limits calls for additional care in driving. Even at the reduced speed of 35 miles per hour which prevailed during 1944, 24,300 deaths, 850,000 injuries and 70,000 permanent disabilities resulted from motor vehicle accidents.

Your safety is your first responsibility to yourself and to your family. Accidents are caused; they seldom just happen. It is up to you.

ANALYZE AND INSPECT!

By D. B. Bille, Illinois Safety and
Job Training Instructor

The real objective of a Safety Program is to eliminate accidents entirely. Its success depends on the full support and cooperation of each employee.

To prevent accidents we must first learn to recognize the hazards involved, eliminating as many as possible and safeguarding against those we cannot eliminate. To do this, it is important that we make frequent inspections of tools, equipment and materials.

Analyze the job to see what tools are needed. After selecting the proper tools, inspect them to make sure they are in good condition. By analyzing the job you can determine the correct method of procedure. This is very important. A simple and easy job can become difficult and dangerous if you proceed in the wrong manner. When the correct procedure has been determined, inspect the materials involved. A faulty piece of material can cause an accident, particularly when it is being depended upon for the safety of the men. There are two kinds of faults in material, the visible and the invisible. Visible faults are readily seen and need no inspection other than to determine their potential danger.

The condition of a pole with internal rot or rot below the ground line can only be judged by inspection. Every pole climbed should be inspected for invisible faults. If we are going to eliminate accidents we must not depend on questionable material.

Visible faults and defects in insulators, arresters, cutouts and transformer bushings are readily seen and proper precautions can be taken to prevent accidents while they are being replaced or repaired.

Invisible faults are more dangerous than visible faults. Before any work is attempted, every effort should be made to protect the men from the invisible faults in material. For instance, when any work is done on the A lines (especially on A 1 poles) a test should be made with a hot stick to see if the conductor is securely tied to the insulator and if the insulator is broken. Many insulators have been broken.

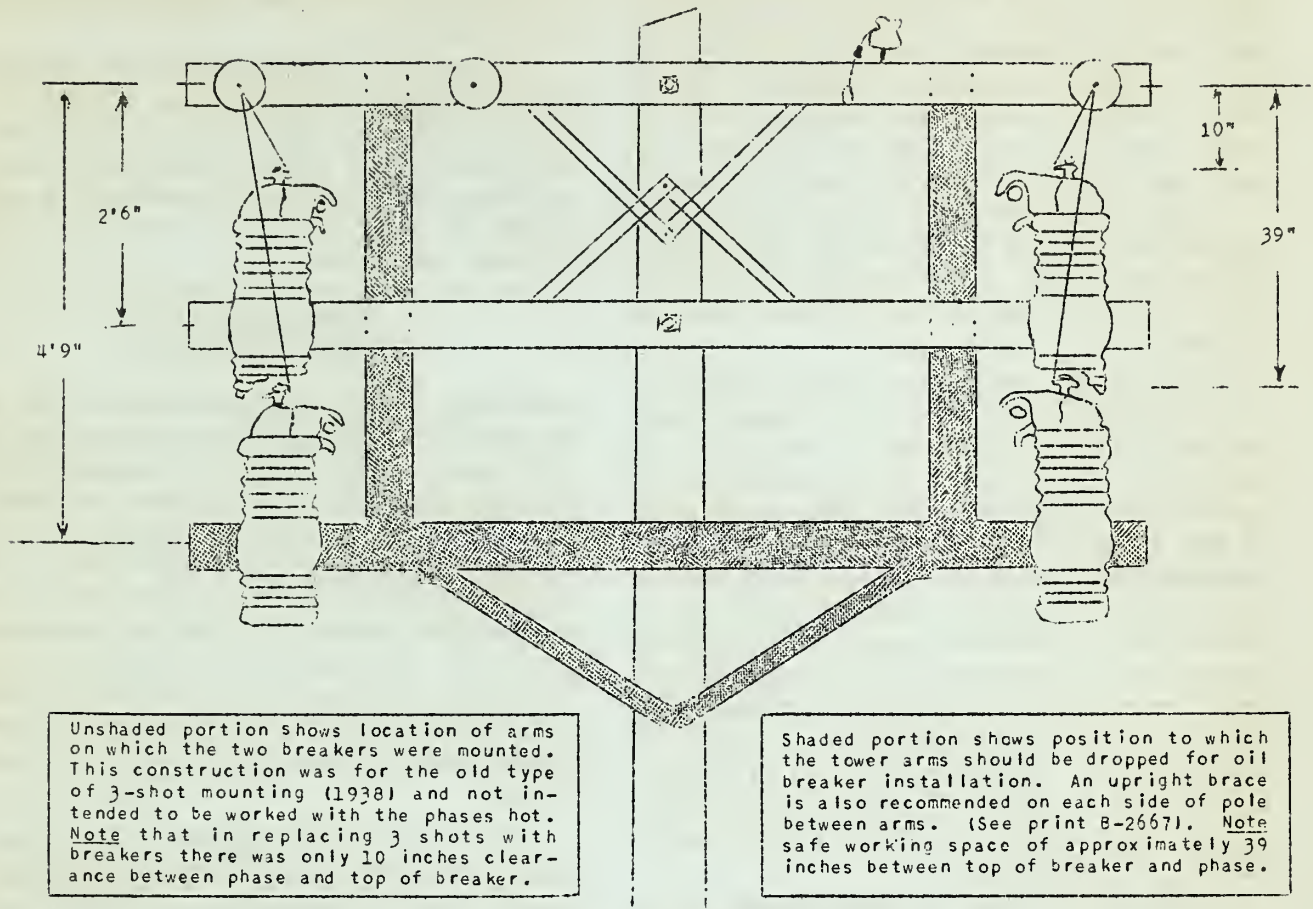
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LOW VOLTAGE SHOCK

(Cont'd from page 1)

the knock-out hole to cut through the insulation, thereby bringing the hot wire of the circuit in contact with the pressure switch case, causing the discharge side of the water system to become energized. The circuit fuses did not blow because of the high resistance in the suction side of the water system. The child was barefooted and was standing in a puddle of water at the time she touched the faucet.

UNSAFE CONSTRUCTION KILLS LINEMAN



THE SITUATION:

A lineman and his helper intended to make a routine inspection of oil circuit breakers to record the serial numbers, counter readings and to add oil to provide the proper oil level inside the breakers.

The first installation, checked without accident, had only two phase wires. The next pole to be checked had three.

Upon arrival at the second breaker installation, the lineman looked the job over and remarked, "This is going to be close." He was familiar with these breaker installations because he had made all of the installations in this area and was picked to do this inspection for that reason.

THE ACCIDENT:

The lineman climbed the pole, and belted off eight or ten feet below the breakers. Since he realized that the job was going to be "close," a few minutes were spent sizing up the job from this position on the pole. Next he put on his rubber gloves, called for his hot stick and removed the live line clamps, de-energizing both breakers. He removed his

rubber gloves and replaced them with leather gloves.

The lineman completed the inspection, except for replacing the oil filler plug in the second breaker. For some unknown reason, he now grasped the lower arm brace with his left hand and raised his body without moving the position of his safety belt. His head contacted the energized middle phase wire.

The helper was unable to climb; he had to drive 18 miles to get the line foreman's assistance. When the foreman arrived at the scene of the accident the lineman was still standing on the pole. He was belted to the pole below the lower arm, his right leg straight and gaffed to the pole, his left hand still grasping the cross arm brace. His right hand and leg were hanging in a natural position. His head was tilted backward. He was dead. Electrical burns extended from the center of his head to his left ear. His cotton cap was punctured over the entire area of the head burn. His left hand which grasped the cross arm brace was badly burned through the leather glove.

DISCUSSION:

The original installation on this pole was two,
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ANALYZE AND INSPECT!

(Cont'd from page 2)

ken off under the tie wire without showing any evidence of such defect. The jar of a man climbing the pole might cause the phase to fall off the pin, and unless it struck the neutral, causing the line to relay, it might fall onto the lineman and still be hot. Even if it were not hot, it might knock him loose from the pole. It is safer to climb the neutral side of pole and stop below the neutral, take a gripall stick and see if you can push the conductor off the pin. If you can, it would be safer to do so with a stick on it than to have it fall on your head or arms.

I know of two near-accidents where insulator was being changed on a hot line when the conductor fell off the pin while the men were on the pole. One time it fell down the back side of the pole past the man who was climbing the neutral side. Another time it fell on the safety belt, but the man had on his rubber gloves and caught it before it touched his body or arms. Precautions should have been taken to prevent such occurrences. A rope could have been thrown over the neutral and tied about thirty feet away from the line on each side. A stake or bar driven into the ground could have been used to tie the rope down. A falling wire striking the rope would slide down and away from the pole and man coming up. When a condition is known to be bad we must deal with it accordingly.

Another danger we must watch out for on A-1 poles is the possibility of breaking the insulator

while stapling the ground wire between the neutral and the top of the pole. If the insulator should be a little loose on the pin it would not take much of a jolt to break it.

Accidents can be eliminated but it requires the combined effort of every employee. Inspect all materials and tools. Analyze every job, not only at the beginning but several times during the job. Conditions and situations often change the aspects of the job. Let's keep up with the job by making frequent inspections.

UNSAFE CONSTRUCTION

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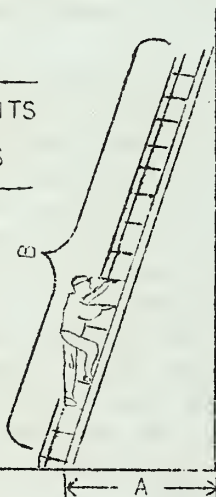
three shot, fuse cutouts represented by print #M3-4 REA Specifications 1938. The arms were spaced on 30 inch centers. When the three shots were replaced by two, type AR-1, oil circuit breakers, the lower arm was not dropped to provide a spacing of 4 feet 9 inches between upper and lower arm centers. The failure to relocate this lower arm caused the top of the newly mounted breakers to be just 10 inches below the phase wire. The middle phase on which there was no breaker was very close to the lineman's head while he inspected the breaker on (c) phase. This insufficient spacing undoubtedly was the cause of the man's death.

The sketch shows the difference in clearance between the unsafe construction used to mount the two breakers and the approved construction which provides proper working clearance and is safe.

CARTOON GALLERY

SAFETY SLANTS
FOR LADDERS

IT PAYS TO BE
CAREFUL!



Distance (A) should
be 1/4th of (B).

WALT
DITZEN



So I see!

Rubber gloves
were not
necessary!

NATIONAL SAFETY COUNCIL